

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (canceled).

2. (currently amended) A packet communication apparatus for transmitting a packet from a first network comprising a first Virtual Private Network (VPN) to a second network comprising a plurality of VPNs, ~~wherein the packet includes a destination Internet Protocol (IP) address Layer 3 (L3) or higher, and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network, said packet communication apparatus comprising:~~

a receiving unit which receives a packet including a destination Internet Protocol (IP) address Layer 3 (L3) or higher, and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network;

a packet generating unit which generates a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the destination IP address on L3 and the first VPN identifier on L2 included in the received packet; and

a transmitter which transmits a packet having added thereto said second VPN identifier on L2 generated in the packet generating unit.

3. (previously presented) A packet communication apparatus according to claim 2, further comprising:

a processing unit which replaces the first VPN identifier with the second VPN identifier.

4. (previously presented) A packet communication apparatus according to claim 2, further comprising:

a route decision processing unit which decides a route to the second network according to the destination IP address and the first VPN identifier.

5. (previously presented) A packet communication apparatus according to claim 2, wherein the packet is an IP packet.

6. (currently amended) A packet communication method of transmitting a packet from a first network comprising a first Virtual Private Network (VPN) to a second network comprising a plurality of VPNs, ~~wherein the packet includes a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first Virtual Private Network (VPN) identifier on Layer 2 (L2) used to identify the first VPN in the first network, the packet communication method comprising the steps of:~~

receiving the packet a packet including a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first Virtual Private Network (VPN) identifier on Layer 2 (L2) used to identify the first VPN in the first network; and

generating a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the destination IP address on L3 and the first VPN identifier on L2 included in the received packet; and
transmitting a packet having added thereto the generated second VPN identifier on L2.

7. (previously presented) A packet communication method according to claim 6, further comprising the step of:

replacing the first VPN identifier with the second VPN identifier.

8. (previously presented) A packet communication method according to claim 6, further comprising the step of:

deciding a route to the second network according to the destination IP address and the first VPN identifier.

9. (previously presented) A packet communication apparatus according to claim 4, wherein the packet is an IP packet.

10. (currently amended) A packet communication system comprising:

a first network comprising a first Virtual Private Network (VPN);

a second network comprising:

a plurality of VPNs; and

a router which:

receives a packet including a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network, from the first network,

generates a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the destination IP address and the first VPN identifier on L2 included in the received packet, and

transmits a packet having added thereto the generated second VPN identifier on L2 from the first network to the second network. [[,]]

~~wherein the packet includes a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network, and~~

~~wherein the router generates a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the destination IP address and the first VPN identifier on L2.~~

11. (previously presented) A packet communication system according to claim 10, wherein the router replaces the first VPN identifier with the second VPN identifier.

12. (previously presented) A packet communication system according to claim 10, wherein the router decides a route to the second network according to the

destination IP address and the first VPN identifier.

13. (currently amended) A packet communication apparatus for transmitting a packet from a first network comprising a first Virtual Private Network (VPN) to a second network comprising a plurality of VPNs, ~~wherein the packet includes a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network, said packet communication apparatus comprising:~~

a receiving unit which receives the packet including a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network,

an index generating unit which generates an index based on the destination IP address on L3 and the first VPN identifier on L2 included in the received packet;

a packet generating unit which generates a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the index; and

a transmitter which transmits a packet having added thereto said second VPN identifier on L2 generated in the packet generating unit.

14. (previously presented) A packet communication apparatus according to claim 13, further comprising:

a processing unit which replaces the index with the second VPN identifier.

15. (previously presented) A packet communication apparatus according to claim 13, further comprising:

a route decision processing unit which decides a route to the second network according to the destination IP address and the first VPN identifier.

16. (previously presented) A packet communication apparatus according to claim 13, wherein the packet is an IP packet.

17. (currently amended) A packet communication method of transmitting a packet from a first network comprising a first Virtual Private Network (VPN) to a second network comprising a plurality of VPNs, ~~wherein the packet includes a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network,~~ the packet communication method comprising the steps of:

~~receiving the packet~~ a packet including a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network;

generating an index based on the destination IP address on L3 and the first VPN identifier on L2 included in the received packet; and

generating a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the index;

transmitting a packet having added thereto the generated second VPN

identifier on L2.

18. (previously presented) A packet communication method according to claim 17, further comprising the step of:

replacing the index with the second VPN identifier.

19. (previously presented) A packet communication method according to claim 17, further comprising the step of:

deciding a route to the second network according to the destination IP address and the first VPN identifier.

20. (canceled).

21. (currently amended) A packet communication system comprising:

a first network comprising a first Virtual Private Network (VPN);

a second network comprising:

a plurality of VPNs; and

a router which:

transmits a packet from the first network to the second network,

wherein the packet includes including a destination Internet Protocol (IP) address on Layer 3 (L3) or higher and a first VPN identifier on Layer 2 (L2) used to identify the first VPN in the first network, from the first network.

generates an index based on the destination IP address on L3 and the first VPN identifier on the L2 included in the received packet, generates a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the index, and

transmits a packet having added thereto the generated second VPN identifier on L2 the second network.

and

~~wherein the router generates an index based on the destination IP address on L3 and the first VPN identifier on L2, and generates a second VPN identifier on L2 used to identify one of the plurality of VPNs in the second network based on the index.~~

22. (previously presented) A packet communication system according to claim 21, wherein the router replaces the index with the second VPN identifier.

23. (previously presented) A packet communication system according to claim 21, wherein the router decides a route to the second network according to the destination IP address and the first VPN identifier.